

Appln. No. 10/038,676
Amdmt. dated October 14, 2004
Reply to Office Action of August 11, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A fertilizer composition comprised of decontaminated manure and Bacillus spores, wherein the decontaminated manure has a total aerobic/facultative viable plate count reduced by 2-4 logs (100 to 10,000 times) compared to raw manure, the Bacillus spores are present in sufficient concentration to effect a viable spore count of between 10⁶ cfu to 10⁹ cfu per gram of dry composition, and the Bacillus spores are derived from Bacillus selected from the group consisting of Bacillus laterosporus (ATCC PTA-3952), Bacillus laterosporus (ATCC PTA-3593), Bacillus licheniformis (ATCC PTA-6175), Bacillus subtilis (ATCC PTA-6174), and mixtures thereof.
2. (original) The fertilizer composition of claim 1 comprising a humic acid.
3. (original) The fertilizer composition of claim 2 comprising an additive selected from the group consisting of N compounds, P compounds, K compounds, and combinations thereof.
4. (original) The fertilizer composition of claim 3 where the decontaminated manure, the Bacillus spores, the additive, and the humic acid are blended into an admixture resulting in a granular or powdered product.
5. (original) The fertilizer composition of claim 4 where the decontaminated manure, the Bacillus spores, the additive, and the humic acid are formed into prills or pellets.

6. (original) The fertilizer composition of claim 1 wherein the decontaminated manure is derived from layer chicken manure, swine manure or a combination thereof.

7. (canceled)

8. (original) The fertilizer composition of claim 2 wherein the humic acid is derived from lignite.

9. (original) The fertilizer composition of claim 3 where the N compound are selected from the group consisting of urea, ammonium sulfate, ammonium nitrate, ammonium phosphate, calcium nitrate, potassium nitrate, sodium nitrate; the P compounds are selected from the group consisting of ammonium phosphate, superphosphate, $\text{Ca}(\text{H}_2\text{PO}_4)_2$, tricalcium phosphate, phosphate salts of sodium or potassium, including orthophosphate salts; and the K compounds are selected from the group consisting of KCl, potassium sulfate, potassium nitrate, and phosphate salts of potassium, including orthophosphate salts.

10. (original) The fertilizer composition of claim 1 wherein the decontaminated manure is derived from raw manure decontaminated by pit composting and solar drying

11. (original) The fertilizer composition of claim 1 wherein the decontaminated manure is derived from reaction of raw manure with concentrated mineral acid and subsequently dried.

12. (original) The fertilizer composition of claim 1 wherein the decontaminated manure is derived from reaction of raw manure with a hypochlorite compound and subsequently dried.

13. (canceled)

Appln. No. 10/038,676
Amdmt. dated October 14, 2004
Reply to Office Action of August 11, 2004

14. (original) The fertilizer composition of claim 1 wherein the Bacillus spores are prepared in water suspension and combined with the decontaminated manure in said suspension.

15. (canceled)

16. (canceled)

17. (currently amended) The fertilizer composition of claim [[16]] 1 wherein the Bacillus spores are derived from mixtures of two or more of Bacillus laterosporus (ATCC _____), Bacillus laterosporus (ATCC _____), Bacillus licheniformis (ATCC _____), and Bacillus subtilis (ATCC _____) Bacillus laterosporus (ATCC PTA-3952), Bacillus laterosporus (ATCC PTA-3593), Bacillus licheniformis (ATCC PTA-6175), and Bacillus subtilis (ATCC PTA-6174).

18. (currently amended) The fertilizer composition of claim [[16]] 1 wherein the Bacillus spores are derived from Bacillus laterosporus (ATCC _____) (ATCC PTA-3952).

19. (currently amended) The fertilizer composition of claim [[16]] 1 where the Bacillus spores are derived from Bacillus laterosporus (ATCC _____) (ATCC PTA-3593).

20. (currently amended) The fertilizer composition of claim [[16]] 1 wherein the Bacillus spores are derived from Bacillus licheniformis (ATCC _____) (ATCC PTA-6175).

21. (currently amended) The fertilizer composition of claim [[16]] 1 where the Bacillus spores are derived from Bacillus subtilis (ATCC _____) (ATCC PTA-6174).

22. (original) The fertilizer composition of claim 2 wherein the humic acid is leonardite.

Appln. No. 10/038,676

Amdmt. dated October 14, 2004

Reply to Office Action of August 11, 2004

23. (original) The fertilizer composition of claim 2 wherein the humic acid is potassium humate.

24. (currently amended) A solid fertilizer composition for plant production comprised of decontaminated manure, Bacillus spores, humic acid and, optionally, one or more N--P--K compounds, wherein the Bacillus spores are from strains of probiotic Bacillus bacteria that enhance beneficial microbial populations within a rhizosphere of a plant.

25. (original) The fertilizer composition of claim 24 formulated as a complete fertilizer.

26. (original) The fertilizer composition of claim 24 formulated as a supplemental fertilizer.

27. (original) The fertilizer composition of claim 24 wherein the decontaminated manure is selected from the group consisting of decontaminated layer chicken manure, decontaminated swine manure, and mixtures thereof.

28. (canceled)